ATTACHMENT 3

Sonos, Inc. vs. Google LLC

Civil Action No. 3:20-cv-06754

Summary of Opinions James Malackowski

James Malackowski









- Senior Managing Director of Ocean Tomo, LLC, a part of J.S. Held
 - Ocean Tomo is an IP-focused valuation, strategy and investment banking firm
- Past President, Licensing Executives Society International, world's largest technology transfer professional association
- **Inventor** on 20 issued patents
- Summa Cum Laude graduate of the University of Notre Dame majoring in accountancy and philosophy
- Certified Public Accountant
- Certified Licensing Professional
- Adjunct Instructor for graduate studies on IP management
- Served as an **expert** on questions relating to intellectual property economics on over 100 occasions

Summary of Assignment

Identify the amount of compensation that Google would pay to access patented Sonos technology



Reasonable Royalty Damages

Information Relied Upon



35 U.S.C. § 284



Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs fixed by the court.

Hypothetical Negotiation

SONOS





The royalty that a licensor (such as Sonos) and a licensee (such as Google) would have agreed upon if both had been reasonably and voluntarily trying to reach an agreement

Required Assumptions

'966 Patent

November 2019

'885 Patent

November 2020

Hypothetical Negotiations



Patents Are Valid and Infringed



Parties Must Reach an Agreement

Key Questions

- What is the competitive relationship between Sonos and Google?
- Are there value indicators in the market for comparable technologies?
- 3 How important is the patented technology?
- How does Google value and share the benefits of third-party technology?
- Does Google have any commercially and technically viable non-infringing alternatives?

Reasonable Royalty Damages

Hypothetical negotiation would have resulted in a minimum per-unit reasonable royalty of

3966 Patent \$0.82

November 5, 2019 / September 30, 2022

'885 Patent \$0.87

November 24, 2020 / November 15, 2022

Determining A Reasonable Royalty



Determining A Reasonable Royalty



Evaluation of Royalty



 How much is paid for comparable technologies?



 How much value is created by the patented technology?



Is there a technologically and economically viable non-infringing alternative?

Quantitative Indicators



 Comparable license agreements and industry technology payments



 Revenue earned by the Accused Instrumentalities due, specifically, to the Asserted Patents



Cost Approach

Cost of non-infringing alternatives

Market Approach – Technology Valuation

Technology



Comparison









Quantitative Indicators



 Comparable license agreements and industry technology payments



 Revenue earned by the Accused Instrumentalities due, specifically, to the Asserted Patents



Cost Approach

Cost of non-infringing alternatives

Income Approach

'966 Patent

94.7 million Google Home app installs



MORE PRODUCTS

GREATER USAGE

MORE REVENUE

'885 Patent 14.1 million Google Home, Nest, and **Chromecast units**

Quantitative Indicators



 Comparable license agreements and industry technology payments



 Revenue earned by the Accused Instrumentalities due, specifically, to the Asserted Patents



Cost Approach

Cost of non-infringing alternatives

Cost Approach

Proposed NIA

Non-Infringing

Commercially Acceptable

Technically Feasible

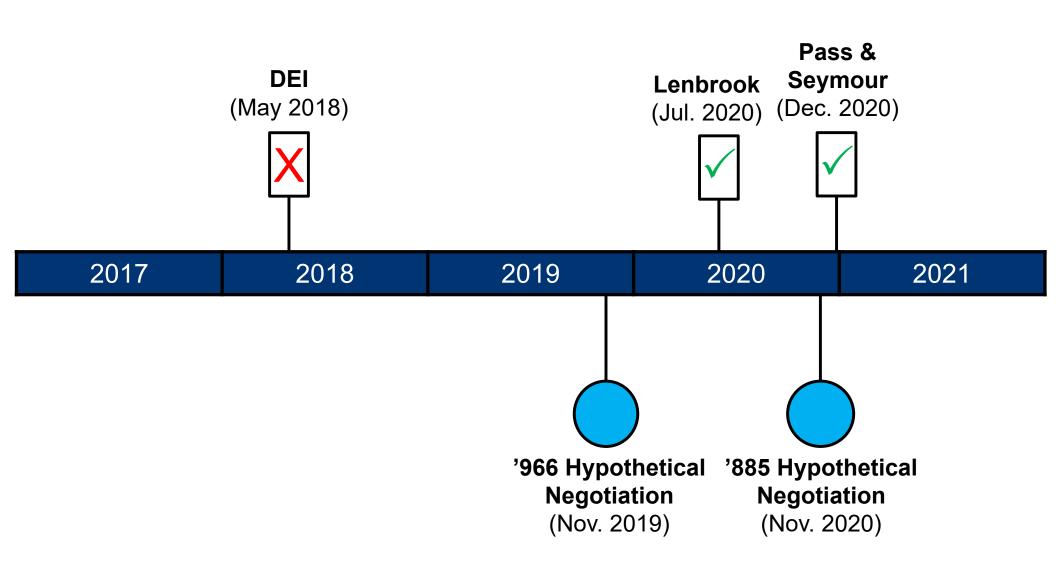


Determining A Reasonable Royalty



Licensing	The Invention	Economics	
1. Other licenses for these patent	9. Advantages over substitutes	5. Commercial relationship between the parties	
2. Comparable patents licensed or purchased by the infringer	10. Nature and benefits of patented invention	6. Derivative or convoyed sales	
3. Nature and scope of license	11. Extent and benefit from infringer's use of the patent	8. Profitability of product	
4. Established policy and licensing programs	12. Customary industry value benchmarks	14. The opinion of qualified experts	
7. Duration of the patent	13. Portion of profit related to the invention	15. Amount deemed reasonable as a result of hypothetical negotiations between licensee and patent holder	

Other Licenses for these Patents



Other Licenses for these Patents

CONFIDEN

This Confident
Industries Limited, hav
Canada ("Lenbrook")
business at 614 Chap
1, 2020 ("Effective Da
and Lenbrook may als

In consideration good and valuable con the Parties agree as for

Section 1.

Definitions

"Acquiring En

"Acquired Pro product lines acquired Affiliated third party, improvements, success

"Acquisition"

"Affiliate" mea

"Alternate For

"Clone Produc Effective Date that h (including elements ur first publicly announce the other Party's unrel a Party or its Affiliate replacements thereofy

"Control" meal outstanding shares rep managing officers of a fifty percent (50%) of entity, or (iii) the power entity, by contract or o'

"Covered Pro

This Confidential Patent License Agreement ("Agreement"), by and between Lenbrook Industries Limited, having a primary place of business at 633 Granite Ct, Pickering, ON L1W 3K1, Canada ("Lenbrook"), and Sonos, Inc., a Delaware corporation having a primary place of business at 614 Chapala Street, Santa Barbara, CA 93101 ("Sonos"), is effective as of January 1, 2020 ("Effective Date") and executed as of July 28, 2020 ("Execution Date"). Each of Sonos and Lenbrook may also be referenced individually, a "Party"; collectively, the "Parties".

4.2.1.1 <u>U.S. Licensing Royalties</u>. For each Covered Product Sold in the United States (excluding those Sold for export), the following Royalty Rates shall apply:

Sonos US Patent Portfolio Licensing Rates

Units of Covered Product(s) Sold annually	0- 5,000	5,001- 10,000	10,001- 20,000	20,001- 40,000	40,001+
Royalty Rate	\$12	\$15	\$19	\$24	\$30

B5142886.11

Highly Confidential - Attorneys' Eyes Only

TX6632, Page 1 of 22



Other Licenses for these Patents

- CONFIDENTIAL UNDER NO

CONFIDENTIAL PATENT LICENS

This Confidential Patent License Agreement ("Agr Seymour, Inc. ("Licensee"), having a primary place of busi NY 13221, and Sonos, Inc. ("Sonos"), a corporation having Chapala Street, Santa Barbara, CA 93101, is effective as of I Sonos and Licensee (each individually, a "Party"; collectivel

Section 1. Definitions

"Acquiring Entity" shall have the meaning set forth

"Acquired Party" shall have the meaning set forth in

"Acquired Products" means software, products and services of product lines acquired by the Parties or their Subsidiaries after the Effective Date.

"Acquisition" shall have the meaning set forth in Se

"Affiliate" means, for any given entity, any other entit common Control with such given entity, on or after the Effect Affiliate for so long as such Control exists.

"Alternate Forum" shall have the meaning set forth

"Clone Product" means any device first Sold by or after the Effective Date that has substantially the same functionality, and for which substantially all elements of the and including Unique Design Elements as defined below) a the other Party or its Existing Subsidiaries that was firs substantially similar product. "Unique Design Elements" are a then-existing device of a Party or its Existing Subsidiaries other products of the same type that are available in the mai

"Control" means direct or indirect ownership of (i) outstanding shares representing the right to vote for member managing officers of an entity, or (ii) for an entity that does than fifty percent (50%) of the ownership interest representing entity.

"Covenant" means the covenant not to sue grant Section 3.2 of this Agreement.

"Covered Products" means:

CONFIDENTIAL PATENT LICENSE AGREEMENT

This Confidential Patent License Agreement ("Agreement"), by and between Pass & Seymour, Inc. ("Licensee"), having a primary place of business at 50 Boyd Avenue, Syracuse, NY 13221, and Sonos, Inc. ("Sonos"), a corporation having a primary place of business at 614 Chapala Street, Santa Barbara, CA 93101, is effective as of December 1, 2020 ("Effective Date"). Sonos and Licensee (each individually, a "Party"; collectively, the "Parties") agree as follows.

4.2.1.1 <u>U.S. Licensing Royalties</u>. For each Covered Product Sold in the United States, the following Royalty Rates shall apply:

Sonos US Patent Portfolio Licensing Rates					
Units of Covered Product(s) Sold annually	0- 5,000	5,001- 10,000	10,001- 20,000	20,001- 40,000	40,001+
Royalty Rate	\$12	\$15	\$19	\$24	\$30

CASE NO. <u>\$20-cv-08734-WHA</u>

DATE ENTERED_____

BY ____

DEPUTY CLERK

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TX6631, Page 1 of 18

SONOS-SVG2-00042905



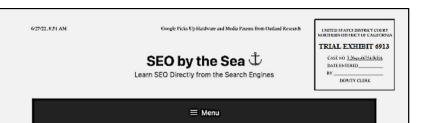
Patent Owner Licensing Concerns

Negotiation Consideration	Commercial Competitor	NPE
Pricing Pressure	RISK	NO RISK
Market Share Loss	RISK	NO RISK
Technology Reputation	RISK	NO RISK
Impact on Royalty Rate	INCREASE	DECREASE

Comparable Patents Licensed or Purchased by the Infringer

Licensee	Malackowski	Reason	Google Expert	Reason
Times Square		NPE; Worldwide		Worldwide
Haltek		NPE (via IIF)		NPE (via IIF)
Vendaria Media		NPE (via IIF)		NPE (via IIF)
Outland Research		NPE		Similar
Peekaboo		NPE		None Provided

Outland Research



Google Picks Up Hardwa Outland Research

09/04/2011 by Bill Slawski

Google was recently assigned a number Research, LLC, from inventor Louis B. R on leave, and most recently professional film maker. A number of Rosenberg's inventions have been developed into commercial p similators and medical imaging systems 3D animation tool used on films such as

It appears that Louis Rosenberg now sp company Outland Pictures than as an in the US Patent and Trademark Office ass showed up recently in the USPTO's pate to Google, with an execution date of Au August 29, 2011.

These patents cover a wide range of inv addition to an alternative game controll patent that describes controlling electro them. Another watches where you're los place if you look away or switch docum provide ways to use your cell phone to d played in restaurants or nightclubs. A se phones and/or media players such as the

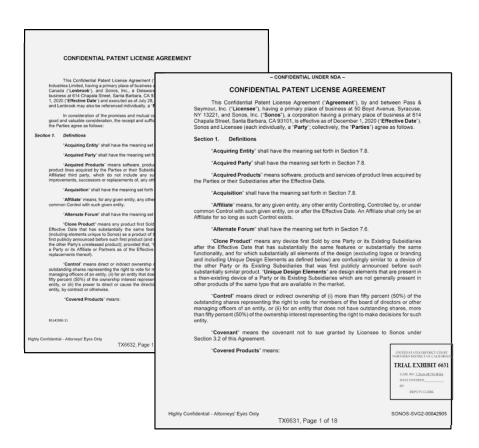
oww.scobythesea.com/2011/09/google-picks-up-hardware-and-medi-

Google was recently assigned a number of unusual and interesting patents from Outland Research, LLC, from inventor Louis B. Rosenberg, a Stanford PhD, Cal Polytech Professor on leave, and most recently professional film maker. A number of Rosenberg's inventions

These patents cover a wide range of inventions, but none of them really involve search. In addition to an alternative game controller or computer input device, there's another patent that describes controlling electronic devices by looking at them and commanding them. Another watches where you're looking on a computer or ebook reader to save your place if you look away or switch documents. A pair of the Outland Research patents provide ways to use your cell phone to collaboratively rate or reject songs that might be played in restaurants or nightclubs. A series of other patents add enhancements to cell phones and/or media players such as the ability for a group of people to run their own collaborative radio station, or to shake a media player in a certain way to change songs or playlists.



Nature and Scope of License





Non-Exclusive Worldwide Portfolio

Non-Exclusive U.S. Asserted Patents Only

Established Policy and Licensing Programs

Sonos actively maintained its patent monopoly

Sonos and Lenbrook Reach Settlement In Patent Infringement Case

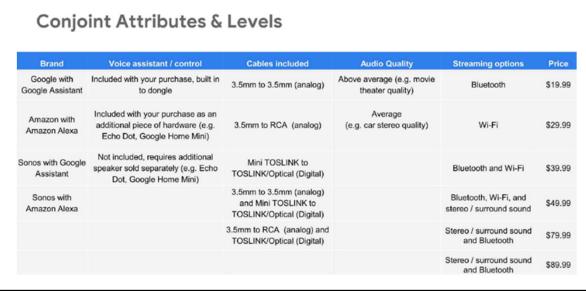
Undisclosed terms include multi-year licensing deal associated with all BluOS enabled solutions worldwide

Santa Barbara, Calif. – July 30, 2020 – Sonos (Nasdaq: SONO) and Lenbrook Industries today announced they have reached a confidential settlement in Sonos' patent infringement lawsuit against Lenbrook Industries, and Lenbrook America, which sell the Bluesound high-resolution multizone audio systems. As part of this settlement, Lenbrook Industries will pay royalties for a license to Sonos' patents for all BluOS enabled devices.

"Sonos is a company founded on innovation – it is a part of our DNA. Nearly twenty years ago, we invented multi-room wireless streaming, and since then we have developed many of the innovations that enable today's listening experiences and will also enable tomorrow's," said Eddie Lazarus, Chief Legal Officer. "We welcome and encourage competition, and want to make sure that all companies entering this space recognize the strength of our IP and provide appropriate compensation. Today's settlement reflects those principles."

Commercial Relationship Between the Parties

Google recognizes competition with Sonos



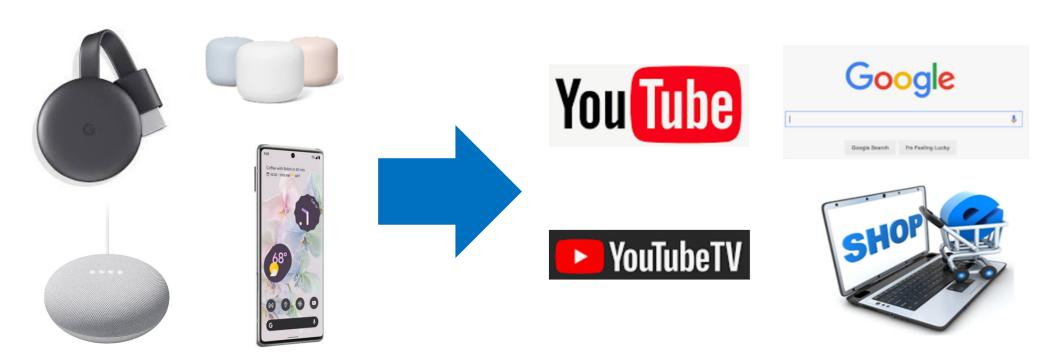






Derivative or Convoyed Sales

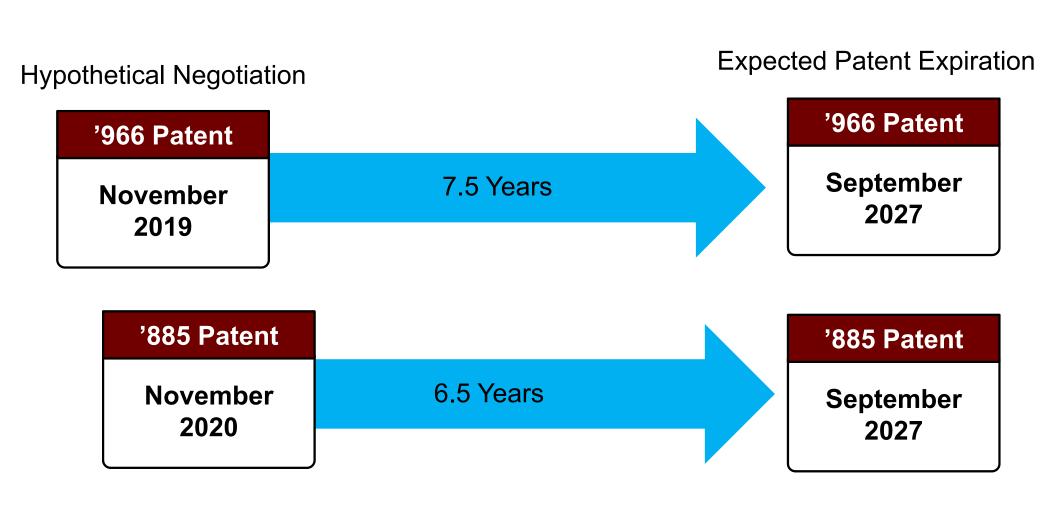
Google generates significant indirect revenue from related non-hardware sales



Chromecast, Nest, Pixel

YouTube, YouTube TV, Search, E-commerce

Duration of the Patent



Advantages Over Substitutes Nature and Benefits of Patented Invention

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For instance, the ability to use the Accused Google Controllers to create and save predefined speaker groups of Accused Google Players that can later be launched on demand for synchronized playback provides advantages over other technology for grouping "zone players" in a networked multi-zone audio system that requires a user to create a group from scratch each time the user wishes to listen to synchronized audio on a different group by selecting the particular "zone players" to include in the group in an ad-hoc manner, one-by-one, at the time that the group is to be activated for synchronous playback. See '885 Patent at 8:30-45. As the '885 Patent notes, this ad-hoc grouping process "may sometimes be quite time consuming," because each time the user wishes to activate a different group for synchronous playback, the user has to repeat the adhoc process of selecting each of the "zone players" to include in the group even if it is a grouping of "zone players" that has previously been formed and activated by the user on many other occasions in the past. Id. By incorporating Sonos's claimed "zone scene" technology into the Accused Google Controllers and the Accused Google Players, a user can create and save as many speaker groups as desired using the Google Home app, and then later listen to synchronized audio on any one of the pre-saved speaker groups on demand by simply selecting the speaker group for launch via, for example, the Google Home app, Google's YouTube Music app, or the Spotify app. This is advantageous because instead of having to create each group from scratch by selecting the Accused Google Players to include in the speaker group in a "time consuming" ad-hoc manner at the time the user wishes to activate the group for synchronous playback, the user can simply select a pre-saved speaker group for launch.

Extent and Benefit from Infringer's Use of the Patent

Google markets and promotes the benefits provided by the Asserted Patents

Listen, from room to room to room.



"Hey Google, play party playlist on my speakers group"

Nest speakers work together, so you can create your own audio system.

Group your Google Assistant devices

You can create groups of speakers, Smart Displays, and Smart Clocks so all of your devices play the same audio throughout your house.

This feature doesn't work on Bose or Sonos speakers that have the Google Assistant.

What you need

You need two or more of the devices listed below. You can group speakers, Smart Displays, and Smart Clocks in any combination.

- · Google Home
- · Google Nest Speakers
- Chromecast (2nd generation and above)
- · Smart Displays with Google Assistant
- · Chromecast Audio
- · Speakers with Chromecast built-in
- Smart Clock

Customary Industry Value Benchmarks

Wired System



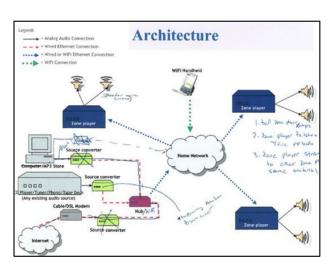


Mobile Application



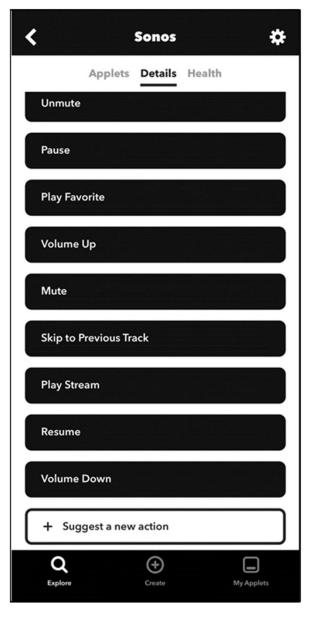


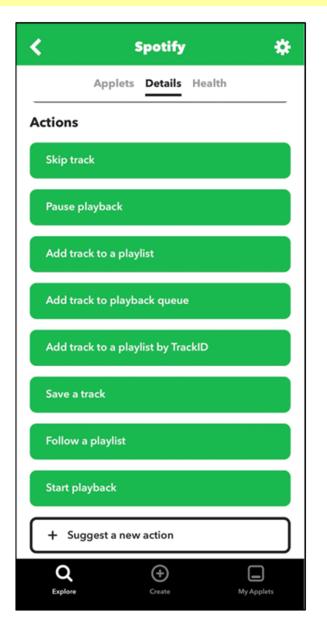
Embedded Software



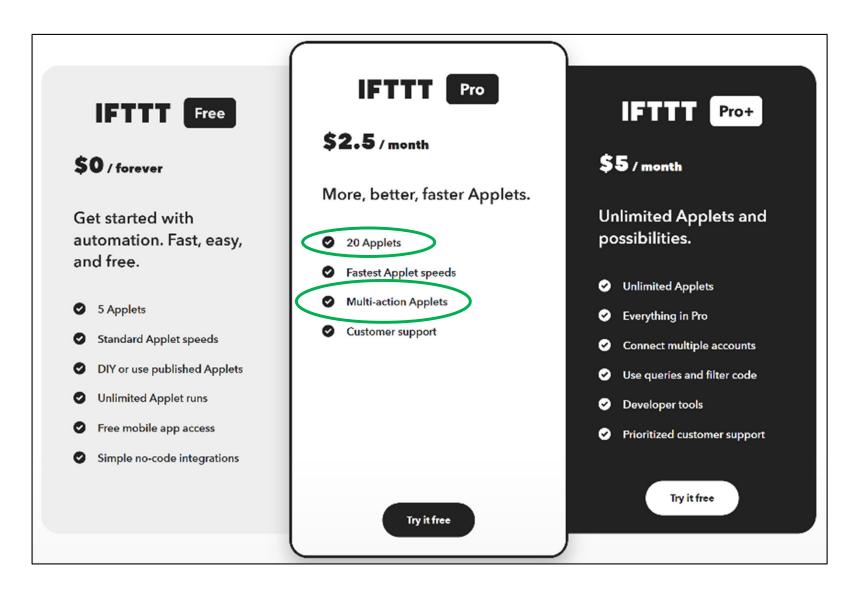


IFTTT - If This Then That





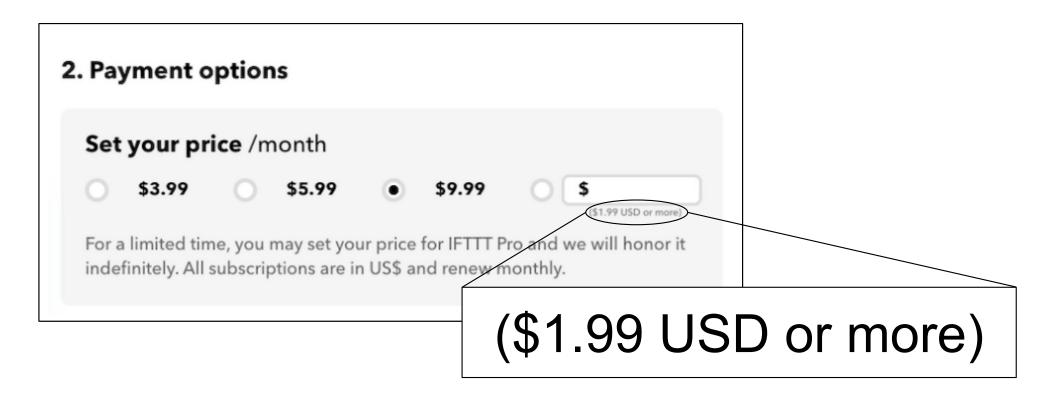
IFTTT Service Options



IFTTT Technology Comparison

Capability	IFTTT	Sonos Patents
Create predefined speaker group		
Save predefined speaker group		
Invoke predefined speaker group later		
Name predefined speaker group to common theme		
Allows predefined speaker groups to include overlap		
Configure speaker group for synchronous media playback		

Comparable Technology Market Price



Minimum monthly price offered, \$1.99, as starting point

Apportion for Smartphone Lifespan

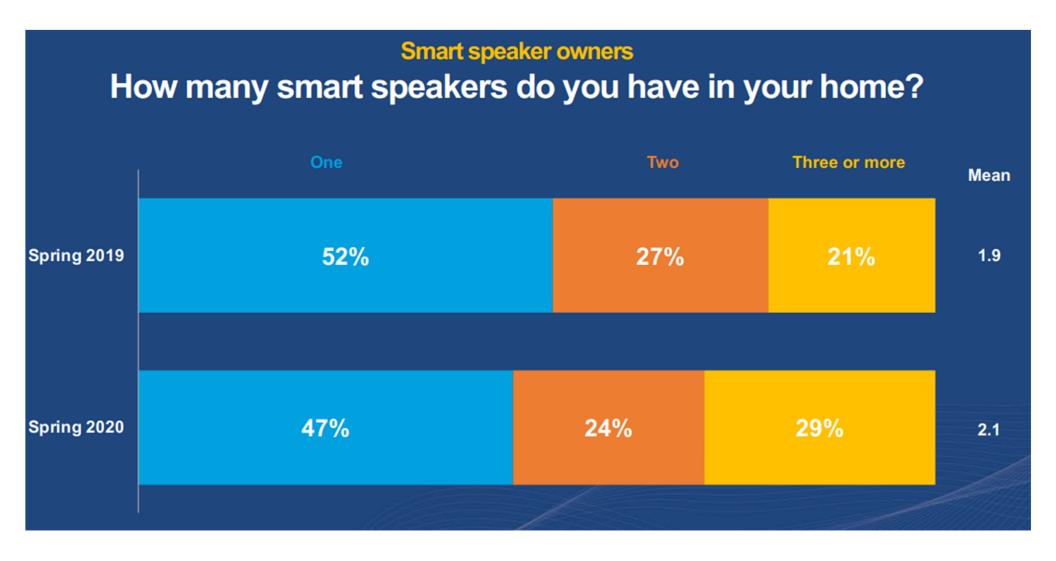
The average life of a smartphone

The opinions about the average lifespan of a smartphone are quite varied. The Consumentenbond estimates the average lifespan at 2.5 years. Other sources indicate that a new smartphone will last 15 to 18 months. The lifespan of your smartphone depends on how you handle your device. Yet, however economical you are on your device, there are several factors that affect lifespan. You can read which ones are below.

The average smartphone can last for about 2 to 4 years at about the 3-year mark you'll notice that the hardware on your phone is significantly outdated and your battery will have a capacity far less than it's original, or it might be no longer functional.

Smartphone average lifespan is 2.5 years

Apportion for Multi-Speaker Households





Discounted IFTTT Price - '966 Patent

'966 Patent Metric	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021
Quarterly Subscription Fee Partial Period Factor Present Value Factor	\$ 0.60 0.153 0.994	\$ 0.60 1.000 0.953	\$ 0.60 1.000 0.870	\$ 0.60 1.000 0.799	\$ 0.60 1.000 0.735	\$ 0.60 1.000 0.675
Net Present Value	\$ 0.09	\$ 0.57	\$ 0.52	\$ 0.48	\$ 0.44	\$ 0.40
'966 Patent Metric	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022	_Total_
Quarterly Subscription Fee Partial Period Factor Present Value Factor	\$ 0.60 1.000 0.621	\$ 0.60 1.000 0.571	\$ 0.60 1.000 0.524	\$ 0.60 1.000 0.482	\$ 0.60 0.847 0.446	\$ 6.57 n/a n/a
Net Present Value	\$ 0.37	\$ 0.34	\$ 0.31	\$ 0.29	\$ 0.23	\$ 4.04

Discounted IFTTT Price - '885 Patent

'885 Patent Metric	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022
Quarterly Subscription Fee Partial Period Factor Present Value Factor	\$ 0.60 0.101 0.996	\$ 0.60 1.000 0.961	\$ 0.60 1.000 0.892	\$ 0.60 1.000 0.831	\$ 0.60 1.000 0.773	\$ 0.60 1.000 0.720
Net Present Value	\$ 0.06	\$ 0.57	\$ 0.53	\$ 0.50	\$ 0.46	\$ 0.43
'885 Patent Metric	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	_Total_
Quarterly Subscription Fee Partial Period Factor Present Value Factor	\$ 0.60 1.000 0.670	\$ 0.60 1.000 0.624	\$ 0.60 1.000 0.581	\$ 0.60 1.000 0.541	\$ 0.60 0.899 0.506	\$ 6.57 n/a n/a
Net Present Value	\$ 0.40	\$ 0.37	\$ 0.35	\$ 0.32	\$ 0.27	\$ 4.27

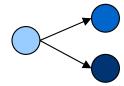
Per-Unit Quantitative Indicators

	'966 Patent	'885 Patent		
Discounted IFTTT Price	\$4.04 ×	\$4.27 ×		
Multi-Speaker Household Apportionment	29%	29%		
Quantitative Indicator	\$1.17	\$1.24		

Conservative Nature of Quantitative Indicators

- Minimum \$1.99 subscription price
- Use only 2 of 20 applets to create one zone scene
- Limit to smartphone lifespan 2.5 years
- Exclude households with 2 or less devices









Portion of Realizable Profit Attributable to Invention

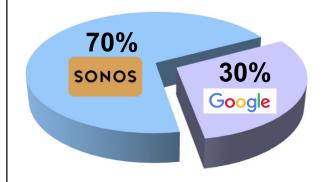
Google Play Store Help Center

Service fees

Apps and in-app products sold through Google Play's billing system or an Additional Billing System (as defined below) in accordance with the Payments policy are subject to a service fee.

As of January 1, 2022, that service fee is equivalent to:

- For developers who are enrolled in the 15% service fee tier, the service fee is:
 - · 15% for the first \$1M (USD) of earnings each year,
 - 30% for earnings n excess of \$1M (USD) each year.
- For developers who are not enrolled in the 15% service fee tier, the service fee is 30%.
- For automatically renewing subscription products purchased by subscribers, the service fee is 15%.



The Opinion of Qualified Experts

I have considered the opinion testimony of qualified experts, including:





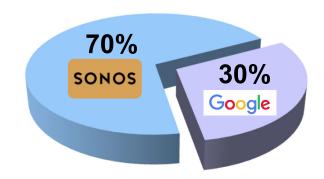
These considerations are reflected throughout my discussion of both the valuation approaches and the Georgia-Pacific Factors



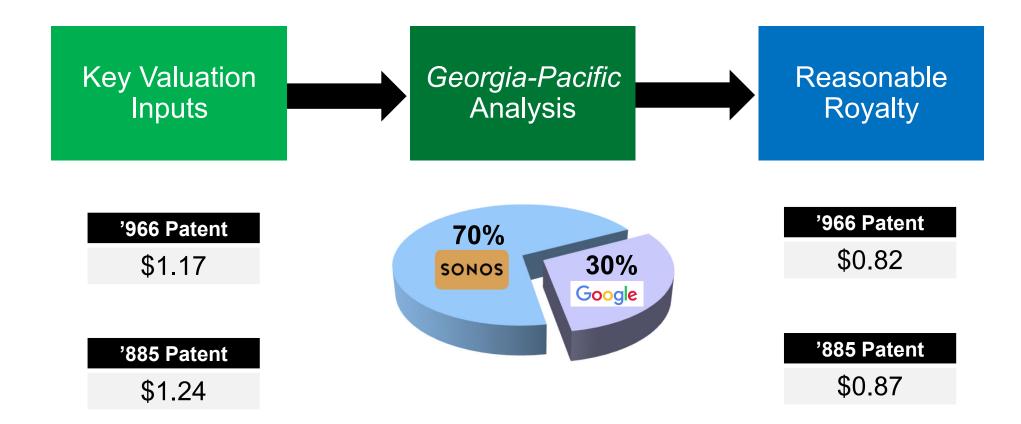
Unit-Based

Apportioned IFTTT Price

No Alternatives
Available



Per-Unit Reasonable Royalty Rate



Reasonable Royalty Damages

Hypothetical negotiation would have resulted in a minimum per-unit reasonable royalty of

'966 Patent

\$0.82

November 5, 2019 / September 30, 2022

'885 Patent

\$0.87

November 24, 2020 / November 15, 2022

Reasonable Royalty Damages

Hypothetical negotiation would have resulted in a minimum reasonable royalty of

'966 Patent

94,660,967

x \$0.82

\$77,546,923

November 5, 2019 / September 30, 2022

'885 Patent

14,133,558

x \$0.87

\$12,246,294

November 24, 2020 / November 15, 2022